Index to Volume 12

Authors and Titles

Altus, D. P., and Canny, M. J.
Water pathways in wheat leaves. I. The division of fluxes between different vein types 173
Altus, D. P., Canny, M. J., and Blackman, D. R.
Water pathways in wheat leaves. II. Water-conducting capacities and vessel diameters of different vein types, and the behaviour of the integrated vein network 183
Ashford, A. E. *See* Gubler, F.
Aston, M. J. *See* Sambo, E. Y.

Bacic, A. *See* Gubler, F.
Badger, M. R. *See* Price, G. D.
Bassett, M. E. *See* Price, G. D.
Benzioni, A., and Dunstone, R. L.
A possible role for abscisic acid in controlling dormancy in jojoba flower buds 463
Benzioni, A. *See also* Dunstone, R. L.
Bergerson, F. J. *See* Ledgard, S. F.
Bhullar, S. S., and Jenner, C. F.
Differential responses to high temperatures of starch and nitrogen accumulation in the grain of four cultivars of wheat 363
Bieleski, R. L., and Redgwell, R. J.
Sorbitol versus sucrose as photosynthesis and translocation products in developing apricot leaves 657
Blackman, D. R. *See* Altus, D. P.
Blakeney, A. B. *See* Gubler, F.
Bryce, J. H., and Wiskich, J. T.
Effect of NAD and rotenone on the partitioning of malate oxidation between malate dehydrogenase and malic enzyme in isolated plant mitochondria 229

Canny, M. J.
Ashby's Law and the pursuit of plant hormones: a critique of accepted dogmas, using the concept of variety 1
Canny, M. J. *See also* Altus, D. P.
Casson, N. E. *See* Pate, J. S.
Chalmers, D. J. *See* Dann, I. R.
Chen, Y-Z., and Patterson, B. D.
Ethylene and 1-aminocyclopropane-1-carboxylic acid as indicators of chilling sensitivity in various plant species 377
Connor, D. J. *See* Legge, N. J.

Corrigenda to:
Effect of sodium nutrition on chlorophyll *a/b* ratios in C_4 plants [M. Johnston, C. P. L. Grof and P. F. Brownell, Vol. 11, No. 4] 96
Temperature dependence of dark CO_2 fixation and acid accumulation in *Kalanchoë daigremontiana* [E. Medina and C. B. Osmond, Vol. 8, No. 6] 212
Cra^{i}$_{z}$, S. *See* Lott, J. N. A.
Crombie, D. S., Hipkins, M. F., and Milburn, J. A.
Gas penetration of pit membranes in the xylem of *Rhododendron* as the cause of acoustically detectable sap cavitation 445
Curran, M.
Gas movements in the roots of *Avicennia marina* (Forsk.) Vierh. 97

Dann, I. R., Jerie, P. H., and Chalmers, D. J.
Short-term changes in cambial growth and endogenous IAA concentrations in relation to phloem girdling of peach, *Prunus persica* (L.) Batsch 395
Day, D. A., Neuburger, M., and Douce, R.
Biochemical characterization of chlorophyll-free leaf mitochondria from pea leaves 219
Interactions between glycine decarboxylase, the tricarboxylic acid cycle and the respiratory chain in pea leaf mitochondria 119
Doherty, G. *See* Hope, A. B.
Douce, R. *See* Day, D. A.
Downton, W. J. S. *See* Robinson, S. P.
Dry, I. B., and Wiskich, J. T.
Characteristics of glycine and malate oxidation by pea leaf mitochondria: evidence of differential access to NAD and respiratory chains 329
Dunstone, R. L., Benzioni, A., Tonnet, M. L., Milthorpe, P., and Shani, A.
Effect of temperature on the synthesis of jojoba wax 355
Dunstone, R. L. *See also* Benzioni, A.

Esashi, Y., Saijoh, Y., Saitoh, H., Ishida, S., and Satoh, S.
CO_2 enhancement of aerobic and hypoxic C_2H_4 production in the tissues of cocklebur seeds at different dormant states 59

Eshel, A.
Effects of NaCl and KCl on growth and ionic composition of the halophytic C_4 succulent chenopods *Salsola kali, Suaeda monoica* and *Suaeda aegyptiaca* 319
Evenson, J. P. *See* Keating, B. A.

Firn, R. D.
Ashby's Law of Requisite Variety and its applicability to hormonal control 685
Fisher, M. J. *See* Ludlow, M. M.

Goodchild, D. J. *See* Lott, J. N. A.
Gubler, F., and Ashford, A. E.
Release of ferulic acid esters from barley aleurone. I. Time course of gibberellic-acid-induced release from isolated layers 297
Gubler, F., Ashford, A. E., Bacic, A., Blakeney, A. B., and Stone, B. A.
Release of ferulic acid esters from barley aleurone. II. Characterization of the feruloyl compounds released in response to GA_3 307

Handley, L. *See* Hope, A. B.
Hewitt, F. R., Hough, T., O'Neill, P., Sasse, J. M., Williams, E. G., and Rowan, K. S.
Effect of brassinolide and other growth regulators on the germination and growth of pollen tubes of *Prunus avium* using a multiple hanging-drop assay 201
Hipkins, M. F. *See* Crombie, D. S.
Hope, A. B., Doherty, G., and Stainer, P.
Proton motive force and phosphorylation potential in thylakoids 21
Hope, A. B., Handley, L., and Matthews, D. B.
Further studies of proton translocations in chloroplasts after single-turnover flashes. III. Conditions for the operation of an apparent Q-cycle in thylakoids 387
Hope, A. B., and Matthews, D. B.
Adsorption of amines to thylakoid surfaces and estimations of ΔpH 9
Hough, T. *See* Hewitt, F. R.
Hunt, W. F., and Thomas, V. J.
Growth and developmental responses of perennial ryegrass grown at constant temperature. II. Influence of light and temperature on leaf, tiller and root appearance 69

Ison, R. L.
Short-day cycle requirements for floral initiation of *Stylosanthes guianensis* (Aublet) Sw. var. *guianensis* 291
Ishida, S. *See* Esashi, Y.

Jenner, C. F.
Transport of tritiated water and ^{14}C-labelled assimilate into grains of wheat
I. Entry of THO through and in association with the stalk of the grain 573
II. Independence of entry of ^{14}C-labelled assimilate and THO 587
III. Diffusion of THO through the stalk 595
Jenner, C. F. *See also* Bhullar, S. S.
Jerie, P. H. *See* Dann, I. R.

Keating, B. A., Wilson, G. L., and Evenson, J. P.
Effect of photoperiod on growth and development of cassava (*Manihot esculenta* Crantz) 621
King, R. W. *See* Zeng, Z. R.
Kuo, J. *See* Pate, J. S.
Küppers, M., and Schulze, E.-D.
An empirical model of net photosynthesis and leaf conductance for the simulation of diurnal courses of CO_2 and H_2O exchange 513

Lancaster, D. M., and Rowan, K. S.
Cell division and differentiation in cambial explants of carrot-root tissue 47
Ledgard, S. F., Woo, K. C., and Bergerson, F. J.
Isotopic fractionation during reduction of nitrate and nitrite by extracts of spinach leaves 631
Lee, J. W. *See* O'Brien, T. P.
Legge, N. J.
Relating water potential gradients in mountain ash (*Eucalyptus regnans* F. Muell.) to transpiration rate 89
Legge, N. J., and Connor, D. J.
Hydraulic characteristics of mountain ash (*Eucalyptus regnans* F. Muell.) derived from *in situ* measurements of stem water potential 77
Lott, J. N. A., Randall, P. J., Goodchild, D. J., and Craig, S.
Occurrence of globoid crystals in cotyledonary protein bodies of *Pisum sativum* as influenced by experimentally induced changes in Mg, Ca and K contents of seeds 341
Ludlow, M. M.
Photosynthesis and dry matter production in C_3 and C_4 pasture plants, with special emphasis on tropical C_3 legumes and C_4 grasses 557
Ludlow, M. M. *See also* Sheriff, D. W.; Sinclair, T. R.

Ludlow, M. M., Fisher, M. J., and Wilson, J. R.
Stomatal adjustment to water deficits in three tropical grasses and a tropical legume grown in controlled conditions and in the field 131

Matthews, D. B. *See* Hope, A. B.
Milburn, J. A. *See* Crombie, D. S.
Milthorpe, P. *See* Dunstone, R. L.
Morgan, J. M. *See* Zeng, Z. R.
Mulligan, D. R., and Patrick, J. W.
Phosphorus and carbon budgets of *Eucalyptus pilularis* Smith seedlings during their cotyledonary phase of growth 535
Phosphorus and carbon economies of ectomycorrhizal seedlings of *Eucalyptus pilularis* Smith 669
Murray, D. R., and Waters, S. P.
Multiple forms of aminopeptidases in representatives of the tribe Vicieae (Leguminosae) 39

Neuburger, M. *See* Day, D. A.

O'Brien, T. P., Sammut, M. E., Lee, J. W., and Smart, M. G.
The vascular system of the wheat spikelet 487
O'Neill, P. *See* Hewitt, F. R.

Paleg, L. G. *See* Singh, S. P.
Palit, P.
Translocation and distribution of ^{14}C-labelled assimilate associated with growth of jute (*Corchorus olitorius* L.) 527
Passioura, J. B., and Tanner, C. B.
Oscillations in apparent hydraulic conductance of cotton plants 455
Pate, J. S., Casson, N. E., Rullo, J., and Kuo, J.
Biology of fire ephemerals of the sandplains of the kwongan of south-western Australia 641
Patrick, J. W. *See* Mulligan, D. R.
Patterson, B. D. *See* Chen, Y-Z.
Piddington, R. W., and Ross, D. A.
Velocity distributions of characean cytoplasmic streaming are consistent with random cross-bridge contractions 27
Price, G. D., and Badger, M. R.
Inhibition by proton buffers of photosynthetic utilization of bicarbonate in *Chara corallina* 257
Price, G. D., Badger, M. R., Bassett, M. E., and Whitecross, M. I.
Involvement of plasmalemmasomes and carbonic anhydrase in photosynthetic utilization of bicarbonate in *Chara corallina* 241

Randall, P. J. *See* Lott, J. N. A.
Redgwell, R. J. *See* Bieleski, R. L.
Rimmington, G. M.
A test of a model for light interception by mixtures 681
Robinson, S. P., and Downton, W. J. S.
Potassium, sodium and chloride ion concentrations in leaves and chloroplasts of the halophyte *Suaeda australis* R. Br. 471
Ross, D. A. *See* Piddington, R. W.
Rowan, K. S. *See* Hewitt, F. R., Lancaster, D. M.
Rullo, J. *See* Pate, J. S.

Saijoh, Y. *See* Esashi, Y.
Saitoh, H. *See* Esashi, Y.
Sambo, E. Y., and Aston, M. J.
Evidence for osmotic adjustment in *Phalaris tuberosa* L. cvv. Australian and Sirosa 481
Sammut, M. E. *See* O'Brien, T. P.
Sasse, J. M. *See* Hewitt, F. R.
Satoh, S. *See* Esashi, Y.
Schulze, E.-D. *See* Küppers, M.
Sedgley, M.
Some effects of temperature and light on floral initiation and development in *Acacia pycnantha* 109
Shani, A. *See* Dunstone, R. L.
Sheriff, D. W., and Ludlow, M. M.
Diaheliotropic responses of leaves of *Macroptilium atropurpureum* cv. Siratro 151
Sinclair, T. R., and Ludlow, M. M.
Who taught plants thermodynamics? The unfulfilled potential of water potential 213
Singh, S. P., and Paleg, L. G.
Low-temperature-induced GA_3 sensitivity of wheat.
III. Comparison of low temperature effects on α-amylase production by aleurone tissue of dwarf and tall wheat 269
IV. Comparison of low temperature effects on the phospholipids of aleurone tissue of dwarf and tall wheat 277
V. Sterol conversions in the wheat aleurone tissue during imbibition 549

Smart, M. G. *See* O'Brien, T. P.
Smith, J. R.
The electrical properties of plant cell membranes.
III. The effects of insulated regions upon the cable properties and measured membrane conductance of charophytes 403
IV. The effects of the nodal conductance upon the cable properties and measured membrane conductance of charophytes 413
V. The effects of net longitudinal currents induced with external current electrodes upon the cable properties of charophytes 423
Stainer, P. *See* Hope, A. B.
Stone, B. A. *See* Gubler, F.
Tanner, C. B. *See* Passioura, J. B.
Thomas, V. J. *See* Hunt, W. F.
Tonnet, M. L. *See* Dunstone, R. L.

Waters, S. P. *See* Murray, D. R.
Whitecross, M. I. *See* Price, G. D.
Williams, E. G. *See* Hewitt, F. R.
Wilson, G. L. *See* Keating, B. A.
Wilson, J. R. *See* Ludlow, M. M.
Wiskich, J. T. *See* Bryce, J. H.; Dry, I. B.
Woo, K. C. *See* Ledgard, S. F.

Zeng, Z. R., Morgan, J. M., and King, R. W.
Regulation of grain number in wheat: genotype difference and responses to applied abscisic acid and to high temperature 609

Printed by CSIRO, Melbourne